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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/543,754	04/05/2000	Osamu Sekihata	FUSA 17.211	6383

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Katten, Muchin, Zavis & Rosenman
575 Madison Ave.
New York, NY 10022-2585

EXAMINER

HOM, SHICK C

ART UNIT	PAPER NUMBER
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2666

DATE MAILED: 07/01/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/543,754

Applicant(s)

SEKIHATA, OSAMU

Examiner

Shick C Horn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

2. Claims 1-18 are objected to because of the following informalities: In claims 3, 7 line 4, 6, 6-7, and 7, the words "a plurality of interface units," "a plurality of paths," "a plurality of interface units," and "a destination address," seem to refer back to "a plurality of interface units," "a plurality of paths," "a plurality of interface units," and "a destination address," recited in claims 3, 7 line 2, claims 1, 5 line 10, claims 3, 7 line 2, and claims 3, 7 line 5, respectively. If this is true, it is suggested changing "a plurality of interface units," "a plurality of paths," "a plurality of interface units," and "a destination address," to ---the plurality of interface units---, ---the plurality of paths---, ---the plurality of interface units---, and ---the destination address---,

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respectively. In claims 1, 5, 9, 16, 17, 18 lines 6, 7-8, 12, respectively, the words "a header" and "a received frame" seem to refer back to "a header" and "a received frame" recited in claims 1, 5, 9, 16, 17, 18 lines 2, 1-2, 2, and 3, respectively. If this is true, it is suggested changing "a header" and "a received frame" to ---the header--- and ---the received frame---. In claims 7, 9 lines 5, 6, respectively, the words "a destination address" seem to refer back to "a destination address" recited in claims 5, 9 lines 2-3, respectively. If this is true, it is suggested changing "a destination address" to ---the destination address---. In claim 11 lines 3-4, the words "a frame" seem to refer back to "a frame" recited in claim 9 line 2. If this is true, it is suggested changing "a frame" to ---the frame---. In claim 12 lines 8-9, 9, 11, the word "a frame identifier," "a path," and "a frame" seem to refer back to "a frame identifier," "a path," and "a frame" recited in claim 12 lines 5, 3, 1-2, respectively. If this is true, it is suggested changing "a frame identifier," "a path," and "a frame" to ---the frame identifier---, ---the path---, and ---the frame---, respectively. Appropriate correction is required.

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Claim Rejections - 35 USC § 112

3. Claims 1-11 and 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 5, 9, 16-18 lines 10, 11, 16, and 17, respectively, which recite "a plurality of paths" is not clear as to how and whether they're related to "a path" recited in line 2.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371[©] of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2)

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voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1, 5, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Schuster et al.

Regarding claims 1 and 5:

Schuster et al. disclose the frame forwarding installation for sending a received frame to a path conforming to a destination address contained in a header of the frame, which has been received from a transmitting terminal (col. 2 lines 47-56), comprising: an application discriminating unit for referring to a header of a received frame and determining whether an application of a host layer in the transmitting terminal is a real-time application (col. 9 lines 9-38 and col. 10 lines 14-30); and a frame transmitting unit for sending the received frame to a plurality of paths in the direction of a destination if the application is a real-time application (col. 15 lines 17-22).

Regarding claim 9:

Schuster et al. disclose the frame forwarding installation for sending a received frame to a path conforming to a

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destination address contained in a header of the frame, which has been received from a transmitting terminal (col. 2 lines 47-56), comprising: an address-match discriminating unit for determining whether a destination address or transmission-source address contained in a header of a received frame matches an address that has already been registered (col. 3 lines 14-21, col. 9 lines 9-38 and col. 10 lines 14-30); and a frame transmitting unit for sending the received frame to a plurality of paths in the direction of a destination if the addresses match (col. 15 lines 17-22).

6. Claims 12-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Haddock et al.

Regarding claim 12:

Haddock et al. disclose the frame forwarding installation for receiving a frame, which is directed toward a subordinate destination terminal, from a path and transmitting the frame to the destination terminal (col. 4 lines 11-40), comprising; a storage unit for storing an identifier of a frame that has been transmitted to the destination terminal (col. 39 lines 18-40); and a redundant-frame filter for determining whether a frame

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identifier of a frame newly received from a path has been stored in said storage unit (col. 4 line 41 to col. 5 line 42 and col. 6 lines 11-47), discarding the received frame if the frame is a frame that has already been received (col. 3 lines 27-57), and transmitting the received frame to the destination terminal and storing the identifier of the received frame in said storage unit if the frame is not a frame that has already been received (col. 39 lines 18-40).

Regarding claims 13-15:

Haddock et al. disclose the frame identifier is a sequence of number contained in the frame (col. 24 line 55 to col. 25 line 22).

Haddock et al. disclose the frame identifier is a computational result obtained by subjecting a specific portion of the received frame to a fixed computation (col. 28 line 55 to col. 29 line 2).

Haddock et al. disclose the frame identifier is a frame identifier contained in a tag that has been attached to a received frame (col. 39 lines 18-40).

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Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster et al. in view of Reichman et al.

Regarding claims 2 and 6 Schuster et al. disclose the frame forwarding installation as described in paragraph 5 of this office action.

Schuster et al. did not recite the port number of the received frame matching a port number of the real-time application as in claims 2, and discriminating the type of application from a TCP port number of the received frame as in claim 6.

Reichman et.al. teach that it is known to provide each protocol utilized by the application being identified by its own port number whereby the port number is part of the TCP/UDP header

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embedded within the IP packet wherein each packet is identified by its connection including its source and destination addresses and source and destination ports; if one of the applications transmits packets whose source port within the protocol header corresponds to a predetermined list or the length of the messages is larger than a specified length, the driver requests a channel assignment and if the rate of the transmission is higher than the maximal rate permitted the driver also requests a channel assignment as set forth at col. 17 lines 29-51 in the field of digital and multiplex communications for the purpose of which clearly anticipate the port number of the received frame matching a port number of the real-time application as in claims 2, and discriminating the type of application from a TCP port number of the received frame as in claim 6.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the port number of the received frame matching a port number of the real-time application, and discriminating the type of application from a TCP port number of the received frame as taught by Reichman et al. to the transmission system of Schuster et al. because Reichman et al. teach the desirable advantage of using a known method of application discrimination and said using known method

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of application discrimination being desirable to achieve lower cost in system operation in Schuster et al.

9. Claims 3, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster et al. in view of Kerstein.

Regarding claims 3, 7, and 10 Schuster et al. disclose the frame forwarding installation as described in paragraph 5 of this office action.

Schuster et al. did not teach the interface units wherein said frame transmitting unit has an address table which specifies a plurality of interface units in association with a destination address and sends the received frame to a plurality of paths via a plurality of interface units, which conform to a destination address, if the application is a real-time applications as in claim 3, if the type application is the predetermined type as in claim 7, and if the addresses match as in claim 10.

Kerstein teaches that it is known to provide where data received by the network switch is routed to an internal decision making engine that includes an address table wherein hash keys are generated for the received source and destination addresses and the internal decision making engine uses these hash keys to

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search the address table and generates a forwarding port vector and outputs the result for data forwarding purposes as set forth at col. 2 lines 15-46 and using priority bit to indicate frame priority to allow time-sensitive applications to queue data to ports which require a low-latency response as set forth at col. 7 lines 48-54 in the field of digital and multiplex communications for the purpose of generating data forwarding information in a network switch which clearly anticipate the interface units wherein said frame transmitting unit has an address table which specifies a plurality of interface units in association with a destination address and sends the received frame to a plurality of paths via a plurality of interface units, which conform to a destination address, if the application is a real-time applications as in claim 3. Further, col. 6 lines 21-41 which recite each data frame has a header including at least a destination address, a source address, and type /length information and col. 14 lines 42-56 which recite searching the address table to find a DA/VLAN index match at the fourth address entry containing the forwarding decision information necessary for forwarding the data frame clearly anticipate using the address table to determined if the type application is the

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predetermined type, or if the addresses match as in claims 7 and 10.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the interface units wherein said frame transmitting unit has an address table which specifies a plurality of interface units in association with a destination address and sends the received frame to a plurality of paths via a plurality of interface units, which conform to a destination address, if the application is a real-time applications, if the type application is the predetermined type, or if the addresses match as taught by Kerstein to the transmission system of Schuster et al. because Kerstein teaches the desirable advantage of faster method of generating data forwarding information in a network switch and said faster method of generating data forwarding information in a network switch being desirable to achieve more efficient system operation in Schuster et al.

10. Claims 4, 8, 11, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster et al. in view of Haddock et al.

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Regarding claims 4, 8, 11, and 16-18 Schuster et al. disclose the frame forwarding installation as described in paragraph 5 of this office action.

Schuster et al. did not recite the tag attaching unit for attaching a tag, which includes a frame identifier, to a frame; wherein a frame forwarding installation on the side of a receiving terminal utilizes the frame identifier when determining whether an identical frame has already been received or not as in claims 4, 8, 11, and 16-18.

Haddock et al. teach that it is known to provide the frame forwarding installation for receiving a frame, which is directed toward a subordinate destination terminal, from a path and transmitting the frame to the destination terminal (col. 4 lines 11-40), comprising; a storage unit for storing an identifier of a frame that has been transmitted to the destination terminal (col. 39 lines 18-40); and a redundant-frame filter for determining whether a frame identifier of a frame newly received from a path has been stored in said storage unit (col. 4 line 41 to col. 5 line 42 and col. 6 lines 11-47), discarding the received frame if the frame is a frame that has already been received (col. 3 lines 27-57), and transmitting the received frame to the destination terminal and storing the

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identifier of the received frame in said storage unit if the frame is not a frame that has already been received (col. 39 lines 18-40). Further, col. 39 lines 18-40 which recite the tag which allows address filter to keep a current list of all MAC addresses in CAM by periodically searching for new entries, reading them, and subsequently clearing the tag clearly anticipate the tag attaching unit for attaching a tag, which includes a frame identifier, to a frame.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the tag attaching unit for attaching a tag, which includes a frame identifier, to a frame; wherein a frame forwarding installation on the side of a receiving terminal utilizes the frame identifier when determining whether an identical frame has already been received or not as taught by Haddock et al. because Haddock et al. teach the desirable advantage of a method of reducing congestion and said reducing congestion being desirable to achieve more efficient system operation in Schuster et al.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Bodnar et al. disclose a large packet switch router.

Lee et al. disclose an IP multicast interface.

12. **Any response to this nonfinal action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for Technology Center 2600 only)


Hand-delivered responses should be brought to Crystal
Park II, 2121 Crystal Drive, Arlington. VA., Sixth
Floor (2600 Receptionist at (703) 305-4750).

Any inquiry concerning this communication or earlier
communications from the examiner should be directed to Shick Hom
whose telephone number is (703) 305-4742. The examiner's regular
work schedule is Monday to Friday from 8:00 am to 5:30 pm EST and
out of office on alternate Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao, can be reached at (703) 308-5463.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.


D. M. T.
PATENT EXAMINER

SH

June 22, 2003